z Systems

Small Computer Systems Interface (SCSI) IPL Machine Loader Messages

SC28-6948-00
Level 00a

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Note:
Before you use this information and the product it supports, read the information in "Safety" on page v, Appendix B, "Notices," on page 31, and *IBM Systems Environmental Notices and User Guide*, Z125–5823.

This edition, SC28-6948-00, applies to IBM z Systems and IBM LinuxONE.

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Contents

Safety

Safety notices

Safety notices may be printed throughout this guide. **DANGER** notices warn you of conditions or procedures that can result in death or severe personal injury. **CAUTION** notices warn you of conditions or procedures that can cause personal injury that is neither lethal nor extremely hazardous. **Attention** notices warn you of conditions or procedures that can cause damage to machines, equipment, or programs.

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Laser safety information

All IBM z Systems™ (z Systems™) and IBM LinuxONE™ (LinuxONE) models can use I/O cards such as, ESCON, FICON®, Open Systems Adapter (OSA), InterSystem Channel-3 (ISC-3), or other I/O features which are fiber optic based and utilize lasers (short wavelength or long wavelength lasers).

Laser compliance

All lasers are certified in the US to conform to the requirements of DHHS 21 CFR Subchapter J for Class 1 or Class 1M laser products. Outside the US, they are certified to be in compliance with IEC 60825 as a Class 1 or Class 1M laser product. Consult the label on each part for laser certification numbers and approval information.

CAUTION: Data processing environments can contain equipment transmitting on system links with laser modules that operate at greater than Class 1 power levels. For this reason, never look into the end of an optical fiber cable or open receptacle. (C027)

CAUTION: This product contains a Class 1M laser. Do not view directly with optical instruments. (C028)

About this publication

| This publication is for operators, administrators, system programmers, or end users that will IPL IBM z
| Systems (z Systems™) and IBM LinuxONE™ (LinuxONE) operating systems using the Small Computer
| Systems Interface (SCSI) IPL feature.

SCSI IPL can be initiated from the Support Element (SE) or the Hardware Management Console (HMC) to IPL a program in a logical partition, or it can be initiated from a z/VM® console to IPL a z/VM guest system. In addition, it can be triggered by an operating system (or other type of standalone program) running in a logical partition (LPAR), or as a guest under z/VM. By doing so, the program requests that it be IPL'ed again from a SCSI device, thus overriding its current image in the LPAR or z/VM virtual machine memory.

This publication is also required by those performing a dump of the contents of a logical partition (LPAR) onto a SCSI disk. This function can only be initiated from the SE or HMC where, in this case, the user is an operator or system administrator.

This publication is required if any problems appear during the SCSI IPL or SCSI dump operation. If the SCSI IPL or SCSI dump is triggered from the SE, or the HMC, or if a program running in LPAR triggers a re-IPL of itself, the messages described in this publication appear on the operating systems messages console on the SE or the HMC. If the SCSI IPL is initiated under z/VM, the messages appear on the z/VM user console.

A technical change from the previous edition of this document is indicated by a vertical line (|) to the left of the change.

Understanding the messages

There are three types of messages: error, warning, and informational. They appear in alphabetic order in the following chapter. The messages are identified by a unique message number that is specified in the format MLOXXXnnnt; for example, **MLOFCP002W**. This format is described in the following list:

MLO The first part of the message number is a three-character prefix that represents the technology that issues the message. All messages in this publication are issued by the machine loader, which is represented by the prefix MLO.

XXX The second part of the message number is a three-character identifier that represents the specific component that issues the message. The characters associated with each component is identified below.

- **FCP** FCP device driver
- **PDM** Prepare data mover
- **EVL** Evaluate parameters
- **XML** XML parser
- **LOA** Load SCPL

nnn The third part of the message number is a three-character decimal number that differentiates the message number from other message numbers issued by the same component.

t The last part of the message number is a single-character operator code that represents the type of recovery action that the operator must take in response to the message. The recovery actions are represented by the following characters:

- **E** Indicates that the machine loader could not recover, the machine loader must exit.
- **I** Indicates messages to inform you of what is happening, for example, when the machine loader is finished.

W Indicates that the machine loader has detected some problems but should still be able to continue.

Related publications

Other IBM publications that you will find helpful and that you should use along with this publication can be downloaded from Resource Link® at http://www.ibm.com/servers/resourcelink under the **Library** section.

Revisions

A technical change from the previous edition of this document is indicated by a vertical line (|) to the left of the change.

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Accessibility features

The following list includes the major accessibility features in z Systems® and IBM LinuxONE documentation:

- Keyboard-only operation
- Interfaces that are commonly used by screen readers
- Customizable display attributes such as color, contrast, and font size
- Communication of information independent of color
- Interfaces commonly used by screen magnifiers
- Interfaces that are free of flashing lights that could induce seizures due to photo-sensitivity.

Keyboard navigation

This product uses standard Microsoft Windows navigation keys.

IBM and accessibility

See http://www.ibm.com/able for more information about the commitment that IBM has to accessibility.

How to send your comments

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Chapter 1. Disabled Wait codes

If the SCSI IPL Machine Loader fails, it sets a Disabled Wait PSW to terminate the SCSI IPL operation. The root cause of the fail can typically be determined by watching the output written to the Operating System Messages Console on the SE or onto the terminal, when working under zVM, respectively. The Error messages written by the SCSI IPL Machine Loader are explained in detail in the next chapter.

There are a few cases, however, where the SCSI IPL Machine Loader might fail in an early phase, without the possibility to provide any output to the operator. In this case, the last 2 bytes of the Disabled Wait PSW (bit positions 48 - 63) contain an error code, indicating the root cause of the fail.

This chapter describes the error codes that might be found in a Disabled Wait PSW when the SCSI IPL (or dump) operation failed, without providing any output to the operator. For all other disabled wait codes not explicitly listed here, please watch the output on your operator console to determine the root cause of the problem.

Error Codes: 0x0002, 0x0004, 0x0006, 0x0008

Explanation: Failed to find out architecture of previous Operating System before taking a dump.

Operator response: Take a machine loader dump on the SE and contact your IBM representative.

Error Code: 0x000A

Explanation: IPL Parameters exceed memory limit.

Operator response: Take a machine loader dump on the SE and contact your IBM representative.

Error Code: 0x0222

Explanation: An internal error occurred while moving data.

Operator response: Take a machine loader dump on the SE and contact your IBM representative.

Chapter 2. Error messages

This chapter contains the error messages generated by the machine loader:

MLOFCPnnnt messages - FCP

This section contains the FCP error messages that might result from some problems detected by the FCP device driver. This could be an invalid FCP adapter or a nonexistent LUN.

MLOFCP001E Stopping SCSI IO at the adapter *devno***.**

Explanation: The machine loader was unable to open either the adapter (*devno*), the port (WWPN), or the unit (LUN). The problem could be not recovered.

Operator response: Check your adapter number, port number, or logical unit number.

MLOFCP002W Adapter *devno* **does not exist.**

Explanation: The machine loader was unable to get device information about the specified adapter.

Operator response: Check your adapter number or check if the adapter exists.

MLOFCP003W WWPN *wwpn* **not found by nameserver lookup.**

Explanation: The specified WWPN was not known to the FCP nameserver.

Operator response: Check your WWPN.

MLOFCP004E Port recovery failed on the port with WWPN *wwpn***.**

Explanation: There is a problem opening the specified port (*wwpn*) and the error recovery failed.

Operator response: Check your WWPN.

MLOFCP005E LUN *lun* **already in use in LPAR** *x***, CSS** *y* **(port** *wwpn***, FCP adapter** *devno***).**

Explanation: FCP LUN *lun* at the remote port with WWPN *wwpn* connected to the adapter with device number *devno* is already owned by another operating system instance in LPAR *x*, channel subsystem *y*.

Operator response: Check your I/O configuration.

MLOFCP006E Access denied, cannot open LUN *lun* **(port** *wwpn***, FCP adapter** *devno***).**

Explanation: Access to FCP LUN *lun* on the remote port with WWPN *wwpn* on adapter with device number *devno* is prohibited by access control and cannot be opened.

Operator response: Have your system administrator check the access rights defined in the access control table using the Configuration Utility for FCP LUN Access Control.

MLOFCP007E Access denied, cannot open port *wwpn* **(FCP adapter** *devno***).**

Explanation: Access to remote port with WWPN *wwpn* on adapter with device number *devno* is prohibited by access control and cannot be opened.

Operator response: Have your system administrator check the access rights defined in the access control table using the Configuration Utility for FCP LUN Access Control.

MLOFCP008E Cannot open adapter with device number *devno***.**

Explanation: The machine loader was not able to open the adapter with device number *devno*.

Operator response: Check your I/O configuration.

MLOFCP009E Unable to open target port with WWPN *wwpn* **(d_id** *destination id***) on adapter** *devno***.**

Explanation: The WWPN specified could not be opened.

Operator response: Check the WWPN specified for the load device.

MLOFCP010E Unable to open unit *lun* **on port** *wwpn* **on adapter** *devno***.**

Explanation: The connection to the LUN specified could not be established. Either the LUN specified is not correct or is busy.

Operator response:

1. Check the LUN specified for the load device.
2. Check the access control settings associated with this LUN.
3. Reduce the I/O traffic to the LUN and retry the operation.

MLOFCP011E Device *devno* **is not a recognized FCP device.**

Explanation: No FCP device was found with the specified device number.

Operator response:

1. Check the device number specified for the load device.
2. Check whether the device is online.
3. Check your I/O configuration.

MLOFCP012E NPIV mode configured for channel is not supported by Fabric.

Explanation: The fabric does not support NPIV mode, but the channel is configured to use NPIV mode.

Operator response: Turn off NPIV mode at the channel used.

MLOFCPnnnE Out of memory.

Explanation: The machine loader ran out of memory; (*nnn* may take various values).

Operator response: Take a machine loader dump and contact your IBM representative.

MLOPDMnnnt messages - prepare data mover

This section contains the "prepare data mover" error messages of the machine loader.

MLOPDM002E Unable to load movemap to memory_address: *address*.

Explanation: The machine loader requires storage to hold temporary data. There is not enough free storage available.

Operator response: Increase your LPAR or z/VM virtual machine memory, or take a machine loader dump and contact your IBM representative.

MLOPDM003I Machine loader finished, moving data to final storage location.

Explanation: The machine loader is near completion and now copies the data to the final storage location. Typically, this is the last message of the machine loader to the user.

Operator response: None.

MLOPDM004E Component too large, exceeding 2GB limit.

Explanation: One or more components of the System Control Program (SCP) or the System Control Program Loader (SCPL) are too large. This could be caused by a corrupted boot structure at your boot device or an unsupported SCPL.

Operator response: Prepare your boot device again or take a machine loader dump and contact your IBM representative.

MLOPDM005E Last entry in movemap is not an 'execute' entry.

Explanation: The boot record of the boot device is broken.

Operator response: Prepare your boot device again or take a machine loader dump and contact your IBM representative.

MLOPDMnnnE Out of memory.

Explanation: The machine loader ran out of memory; (*nnn* may take various values).

Operator response: Take a machine loader dump and contact your IBM representative.

MLOEVLnnnt messages - evaluate parameters

This section contains the "evaluate parameters" error messages of the machine loader.

MLOEVL001E Movemap not available.

Explanation: There was an error copying the required boot components to the temporary storage locations.

Operator response: Check previous error messages or take a machine loader dump and contact your IBM representative.

MLOEVL002E Executing data mover failed.

Explanation: There was a problem while copying the loaded boot component to the final storage location.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOEVL003E Wrong tag type: *tag*.

Explanation: The machine loader received an unknown IPL type.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOEVL004W Found unexploited tags in fcp_ipl section.

Explanation: The XML parameter set contains one or more unknown tags.

Operator response: This can be ignored. However, if this leads to other machine loader errors, take a machine loader dump and contact your IBM representative.

MLOEVL005E No SCSI device found on adapter *devno* **with WWPN** *wwpn* **and LUN** *lun*.

Explanation: The machine loader was unable to open the SCSI device.

Operator response: Check your disk, verify your parameters (devno, wwpn, lun), and retry the operation. If the problem persists, take a machine loader dump and contact your IBM representative.

MLOEVL006E Failed to bring device online.

Explanation: The machine loader could not activate the SCSI device using FCP.

Operator response: Check your disk and your parameters (devno, wwpn, lun). Take a machine loader dump and contact your IBM representative.

MLOEVL007E No WWPN supplied.

Explanation: The WWPN is missing within the XML parameter stream.

Operator response: Check your WWPN or take a machine loader dump and contact your IBM representative.

MLOEVL008E Device enabling failed.

Explanation: The machine loader could not enable the boot device.

Operator response: Check your disk and your parameters (devno, wwpn, lun) or take a machine loader dump and contact your IBM representative.

MLOEVL009E Enable_device call failed.

Explanation: The machine loader could not enable the boot device.

Operator response: Check your disk and your parameters (devno, wwpn, lun) or take a machine loader dump and contact your IBM representative.

MLOEVL010E IPL failed.

Explanation: The IPL was unsuccessful.

Operator response: Check for previous errors or take a machine loader dump and contact your IBM representative.

MLOEVL011E DUMP failed.

Explanation: The dump was unsuccessful.

Operator response: Check for previous errors or take a machine loader dump and contact your IBM representative.

MLOEVL012I Machine loader up and running.

Explanation: The machine loader has successfully started.

Operator response: None

MLOEVL013E XML pointer is zero.

Explanation: The machine loader could not find the XML parameter stream.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOEVL014E XML tree evaluation should not return.

Explanation: This piece of code should not be executed.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOEVL016E Adapter *devno* **not found.**

Explanation: The machine loader was not able to find the specified FCP adapter with device number *devno*.

Operator response: Check your I/O configuration.

MLOEVL017E Unable to set FCP device online (devno *devno***, wwpn** *wwpn***, lun** *lun***).**

Explanation: The FCP device could not be set online. This could be a configuration problem or a connectivity problem.

Operator response:

1. Check your IPL parameters (device number, WWPN, FCP LUN).
2. Check your SAN and storage subsystem access control settings (zoning, LUN masking).
3. Check your hardware setup and cabling between adapter, switches, and storage subsystem.

MLOEVL018E Out of memory, could not allocate scp data field.

Explanation: The machine loader ran out of memory.

Operator response: Increase your LPAR or z/VM virtual machine memory, or take a machine loader dump and contact your IBM representative.

MLOEVL019E IPL parameter pointer is not set.

Explanation: The machine loader could not locate the specified IPL parameters.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOEVL020E Unable to read IPL parameters.

Explanation: The machine loader could not evaluate the specified IPL parameters. One or more of these parameters are invalid.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOEVL021E Invalid IPL type.

Explanation: The value in the IPL parameter field specifying the IPL type is not valid.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOEVL022E Failed to get a valid subchannel number for device devno.

Explanation: Either you specified a WWPN of 0 or an invalid device number.

Operator response:

1. Check whether the WWPN you specified for the SCSI IPL/DUMP is 0.
2. Check the device number specified for the load device.
3. Check your I/O configuration.

MLOEVL023E Load failed.

Explanation: The “load from SE” action was unsuccessful.

Operator response: Check for previous errors or take a machine loader dump and contact your IBM representative.

MLOEVL024I Watchdog active.

Explanation: A watchdog was activated, monitoring for timeout and hang situations.

Operator response: None

MLOEVL025E Failed to initialize watchdog (<RC>).

Explanation: The watchdog could not be initialized.

Operator response:

1. Check your z/VM version. It has to be v6.1 or later.
2. If this is not the case, take a machine loader dump and contact your IBM representative.

MLOXMLnnnt messages - XML parser

This section contains error messages from the XML parser.

MLOXML002E Hex value not marked as hex, '0x' missing.

Explanation: One of the machine loader parameters was not marked as a hexadecimal number.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML003E Closing quote is missing.

Explanation: One of the tags in the XML parameter file does not have a closing quote.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML004E The hexadecimal value contains an invalid character.

Explanation: The machine loader dump found an invalid character. The valid hexadecimal characters are 0-9 and A-F.

Operator response: Check your input or take a machine loader dump and contact your IBM representative.

MLOXML005E More than *min* **digits expected, found** *number***.**

Explanation: The machine loader has found a hexadecimal value with less digits than expected.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML006E Less than *max* **digits expected, found** *number***.**

Explanation: The machine loader has found a hexadecimal value with more digits than expected.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML007E End of XML, quote is still open.

Explanation: There is a problem within the XML parameter stream. The machine loader reached the end of the XML but there is still one or more tags open.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML008E Expected hexadecimal LUN, received *lun***.**

Explanation: There is a problem with the specified LUN.

Operator response: Check the specified LUN or take a machine loader dump and contact your IBM representative.

MLOXML009E Expected hexadecimal WWPN, received *wwpn***.**

Explanation: There is a problem with the specified WWPN.

Operator response: Check the specified WWPN or take a machine loader dump and contact your IBM representative.

MLOXML010E Expected hexadecimal BR LBA, received *br_lba***.**

Explanation: There is a problem with the specified alternative boot record.

Operator response: Check the specified boot record LBA or take a machine loader dump and contact your IBM representative.

MLOXML011E Expected hexadecimal SELECTOR, received *selector***.**

Explanation: There is a problem with the specified boot program selector.

Operator response: Check the specified boot program selector or take a machine loader dump and contact your IBM representative.

MLOXML012E Expected hexadecimal DEVNO, received *devno***.**

Explanation: There is a problem with the specified adapter device number.

Operator response: Check the specified adapter device number or take a machine loader dump and contact your IBM representative.

MLOXML013E Expected hexadecimal CSSID, received *cssid***.**

Explanation: There is a problem with the specified channel subsystem identifier.

Operator response: Check the specified channel subsystem identifier or take a machine loader dump and contact your IBM representative.

MLOXML014E Tag <fcp_ipl> contains the invalid tag <*tag***>.**

Explanation: The machine loader has found an unknown tag within the *fcp_ipl* tag.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML016E More than one <devno> tag.

Explanation: The machine loader found a problem within the XML parameter stream. The adapter device number was specified more than once.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML017E Missing <devno> tag.

Explanation: The machine loader found a problem within the XML parameter stream. The adapter device number is missing.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML018E More than one <wwpn> tag.

Explanation: The machine loader found a problem within the XML parameter stream. The WWPN was specified more than once.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML019E Missing <wwpn> tag.

Explanation: The machine loader found a problem within the XML parameter stream. The WWPN is missing.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML020E More than one <lun> tag.

Explanation: The machine loader found a problem within the XML parameter stream. The LUN was specified more than once.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML021E Missing <lun> tag.

Explanation: The machine loader found a problem within the XML parameter stream. The LUN is missing.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML022E More than one <boot_program_selector> tag.

Explanation: The machine loader found a problem within the XML parameter stream. The boot program selector was specified more than once.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML023E More than one <br_lba> tag.

Explanation: The machine loader found a problem within the XML parameter stream. The alternative boot record was specified more than once.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML024E Tag <ipl_platform_loader> contains the invalid tag <*tag*>.

Explanation: The machine loader has found an unknown tag within the <ipl_platform_loader> tag.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML025E Missing <fcp_ipl> tag.

Explanation: The machine loader found a problem within the XML parameter stream. The <fcp_ipl> tag is missing.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML026E More than one <fcp_ipl> tag.

Explanation: The machine loader found a problem within the XML parameter stream. The <fcp_ipl> tag was specified more than once.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML027E Tag <system_control_program> contains the invalid tag <*tag*>.

Explanation: The machine loader has found an unknown tag within the <system_control_program> tag.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML028E More than one <parameter_string> tag.

Explanation: The machine loader found a problem within the XML parameter stream. The <parameter_string> tag was specified more than once.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML029E Invalid type: *type* (only 'ipl' or 'dump').

Explanation: The machine loader found an invalid type within the XML parameter stream.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML030E IPL control section should have exactly 1 attribute, found *number*.

Explanation: The machine loader found a problem within the XML parameter stream. The <ipl_control_section> tag has zero or more than one attribute.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML031E IPL control section contains an incorrect attribute name: *name*.

Explanation: The machine loader found a problem within the XML parameter stream. The attribute name of the <ipl_control_section> tag is not correct.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML032E IPL control section contains an empty attribute value: *value*.

Explanation: The machine loader found a problem within the XML parameter stream. The attribute name of the <ipl_control_section> tag is not set.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML033E Tag <ipl_control_section> contains the invalid tag <*tag*>.

Explanation: The machine loader found a problem within the XML parameter stream. The <ipl_control_section> tag contains an unknown tag.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML034E More than one <ipl_platform_loader> tag (*number*).

Explanation: The machine loader found a problem within the XML parameter stream. There should be one <ipl_control_section> tag, but the machine loader has found more than one.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML035E Missing <ipl_platform_loader> tag.

Explanation: The machine loader found a problem within the XML parameter stream. There should be one <ipl_control_section> tag, but the machine loader has found none.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML036E More than one <system_control_program> tag (*number*).

Explanation: The machine loader found a problem within the XML parameter stream. There should be one <system_control_program> tag, the machine loader has found more than one.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML037E Tag <eServer_ipl_script> contains the invalid tag <*tag*>.

Explanation: The machine loader found a problem within the XML parameter stream. The *<eServer_ipl_script>* tag contains an unknown tag.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML038E More than one <type> tag (*number*).

Explanation: The machine loader found a problem within the XML parameter stream. There should be one <type> tag, the machine loader found more than one.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML039E Missing <type> tag.

Explanation: The machine loader found a problem within the XML parameter stream. There should be one <type> tag, the machine loader found none.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML040E More than one <ipl_control_section> tag (*number*).

Explanation: The machine loader found a problem within the XML parameter stream. There should be one <ipl_control_section> tag, the machine loader has found more than one.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML041E Missing <ipl_control_section> tag.

Explanation: The machine loader found a problem within the XML parameter stream. There should be one <ipl_control_section> tag, the machine loader has found none.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML042E More than one or missing <eServer_ipl_script> tag.

Explanation: The machine loader found a problem within the XML parameter stream. There should be one <eServer_ipl_script> tag, the machine loader has found none or more than one.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML043E Top level tag is not <eServer_ipl_script>.

Explanation: The machine loader found a problem within the XML parameter stream. The top level tag should be <eServer_ipl_script>, the machine loader could not locate it.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML052E Parsing attributes - missing '=' in *attribute*.

Explanation: The machine loader found a problem within the XML parameter stream. The syntax of one of the attributes was incorrect. Attribute name and value have to be separated by an "=" sign.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML053E Parsing attributes - expected ", received *char*.

Explanation: The machine loader found a problem within the XML parameter stream. The syntax of one of the attributes was incorrect.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML054E Parsing attributes - attribute ends without opening ".

Explanation: The machine loader found a problem within the XML parameter stream. The syntax of one of the attributes was incorrect.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML055E Parsing attributes - expected ", received *char*.

Explanation: The machine loader found a problem within the XML parameter stream. The syntax of one of the attributes was incorrect.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML056E Unable to process attributes.

Explanation: The machine loader found a problem within the XML parameter stream. The syntax of one of the attributes was incorrect.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML060E Found attribute without '=' in *string***.**

Explanation: The machine loader found a problem within the XML parameter stream. The syntax of one of the attributes was incorrect.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML061E Parsing attributes - expected ", received *char***.**

Explanation: The machine loader found a problem within the XML parameter stream. The syntax of one of the attributes was incorrect.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML062E Parsing attributes - missing opening ".

Explanation: The machine loader found a problem within the XML parameter stream. The syntax of one of the attributes was incorrect.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML063E Parsing attributes - expected ", received *char***.**

Explanation: The machine loader found a problem within the XML parameter stream. The syntax of one of the attributes was incorrect.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML064E Found invalid string *string* **in <? ... ?>. (line** *line_number***)**

Explanation: The machine loader found a problem within the XML parameter stream. The XML header contains an invalid attribute *string* in XML line *line_number*.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML072E Unable to add a child to the XML node.

Explanation: The machine loader found a problem within the XML parameter stream.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML073E Unable to add attribute to the XML node.

Explanation: The machine loader found a problem within the XML parameter stream.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML074E No more tags open: <*tag***>.**

Explanation: The machine loader found a problem within the XML parameter stream.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML075E Opening and closing tags do not match: <*tag1***> and <***tag2***>.**

Explanation: The machine loader found a problem within the XML parameter stream.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML076E Unknown closing tag found: <*type*>.

Explanation: The machine loader found a problem within the XML parameter stream.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML077E XML stream corrupted.

Explanation: The machine loader found a problem within the XML parameter stream.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML078E XML stream corrupted.

Explanation: The machine loader found a problem within the XML parameter stream.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXML079E XML stream corrupted.

Explanation: The machine loader found a problem within the XML parameter stream.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOXMLnnnE Out of memory.

Explanation: The machine loader ran out of memory; (*nnn* may take various values).

Operator response: Take a machine loader dump and contact your IBM representative.

MLOLOAnnnt messages - load SCPL

This section contains the error messages that are generated in the load SCPL code.

MLOLOA001I End of memory chunk *number* **reached.**

Explanation: The machine loader has reached the end of the current read-write memory chunk. Now the loader is looking for the next read-write memory chunk.

Operator response: None.

MLOLOA002E No more free memory chunk left.

Explanation: There is no free read-write memory chunk left in storage. The machine loader runs out of memory.

Operator response: Increase your storage.

MLOLOA003I Unable to write to memory chunk *number***.**

Explanation: The current memory chunk is not a read-write memory chunk. The machine loader will try the next free memory chunk.

Operator response: None.

MLOLOA004E No more free memory chunk left.

Explanation: The last checked memory chunk was not read-write, but there is no free memory chunk left.

Operator response: Increase your storage.

MLOLOA005E Out of range, there is no matching memory chunk.

Explanation: The machine loader could not find a free memory chunk.

Operator response: Increase your storage or take a machine loader dump and contact your IBM representative.

MLOLOA006E Unable to detect block size.

Explanation: The machine loader was unable to detect the blocksize of the boot device.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOLOA007E Unable to seek to program table pointer.

Explanation: The machine loader was unable to find the start position of the boot record on the boot device.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOLOA009E Error while reading Boot Record.

Explanation: The machine loader was unable to read the boot record from the boot device containing the program table pointer.

Operator response:

1. Check your SAN configuration and access rights.
2. Take a machine loader dump and contact your IBM representative.

MLOLOA010E Boot Record does not contain a valid pointer.

Explanation: There is an invalid magic number within the boot record.

Operator response: Prepare your boot disk again and rewrite your boot record.

MLOLOA011E Seek to program table block failed.

Explanation: The machine loader was unable to jump to the block containing the program table.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOLOA012E Error while reading program table block.

Explanation: The machine loader was unable to read the block from the boot device containing the program table.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOLOA013E Invalid Program Table, wrong or missing magic number.

Explanation: The magic number within the program table is corrupted or missing.

Operator response: Prepare your boot disk again.

MLOLOA014E Boot Program Table entry is not valid.

Explanation: The specified entry in the boot program table is not valid. It contains either a negative or zero block address or a negative or zero block size.

Operator response: Prepare your boot disk again.

MLOLOA016E Unable to seek to block specified in bootmap entry.

Explanation: The machine loader was unable to jump to the block specified in the segment table entry.

Operator response: Prepare your boot disk again.

MLOLOA017E Error while reading bootmap block.

Explanation: The machine loader was unable to read a block specified within the segment table.

Operator response: Prepare your boot disk again.

MLOLOA018E DUMP memory limit reached: *number* **bytes.**

Explanation: Machine loader and system dump program have to fit into a special amount of main storage to make sure not to destroy the dump. In this case, the system dump program is too big.

Operator response: Make sure you have prepared your dump disk using the right system dump program, try to prepare your dump disk again, or take a machine loader dump and contact your IBM representative.

MLOLOA019E Unable to load data to memory address: *address***.**

Explanation: The machine loader was unable to store some data at a temporary location in storage.

Operator response: Check previous error messages, increase your main storage, or take a machine loader dump and contact your IBM representative.

MLOLOA022E Block size of a segment table entry is zero.

Explanation: The block sizes of all segment table entries have to be greater than zero.

Operator response: Prepare your boot disk again.

MLOLOA023E Unable to seek to segment table entry.

Explanation: The machine loader was unable to jump to the block containing the segment table entries.

Operator response: Prepare your boot disk again.

MLOLOA024E Error while reading segment table entry.

Explanation: The machine loader was unable to read the block, containing the segment table, from the boot device.

Operator response: Prepare your boot disk again.

MLOLOA025E Segment table entry corrupted.

Explanation: The blocksize of this segment table entry is not zero.

Operator response: Prepare your boot disk again.

MLOLOA026E Could not create movemap entry.

Explanation: The machine loader was unable to create a movemap.

Operator response: Check previous error messages for "Out of memory" situations and increase your memory or take a machine loader dump and contact your IBM representative.

MLOLOA027E Unknown type in component table entry.

Explanation: The component table contains an entry with an unknown type.

Operator response: Check to use the right disk preparation tool or take a machine loader dump and contact your IBM representative.

MLOLOA028E Missing EXECUTE entry in component table.

Explanation: The last entry in the component table has to have the type EXECUTE.

Operator response: Prepare your boot disk again or take a machine loader dump and contact your IBM representative.

MLOLOA029I Unable to load parameters to memory address: *old_address*, **using** *new_address* **now.**

Explanation: The machine loader is looking for a gap between two components to store the boot parameters. The loader has found a gap, but was not able to write the parameters into it. The loader will search now for the next possible gap.

Operator response: None.

MLOLOA030E Unable to load parameters to memory address *address*.

Explanation: The machine loader is looking for a gap between two components to store the boot parameters. The loader has found a gap, but was not able to write the parameters into it and there is another gap available.

Operator response: Increase your main storage or take a machine loader dump and contact your IBM representative.

MLOLOA031E Error while reading component.

Explanation: The machine loader was not able to create a movemap entry for the boot parameters.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOLOA032E No space left to store the parameters.

Explanation: The machine loader is trying to store the boot parameters right after the last component; there is not enough free space.

Operator response: Increase your main storage.

MLOLOA033I Unable to load parameters to memory address: *old_address***, using** *new_address* **now.**

Explanation: The machine loader is looking for a free storage location after the last component to store the boot parameters. The loader has found free memory, but was unable to write the parameters into it. The loader will search now for the next possible storage location.

Operator response: None.

MLOLOA034E Unable to load parameters to memory address: *address***.**

Explanation: The machine loader is looking for a free storage location after the last component to store the boot parameters. The loader has found free memory, but was unable to write the parameters into it. There is no other possible storage location.

Operator response: Increase your main storage or take a machine loader dump and contact your IBM representative.

MLOLOA035E Unable to create movemap entry for parameters.

Explanation: The machine loader was unable to create a movemap entry for the boot parameters.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOLOA036E IMAGE entry expected, received type *type***.**

Explanation: The machine loader found a component table entry that was not type IMAGE.

Operator response: Prepare your boot disk again or take a machine loader dump and contact your IBM representative.

MLOLOA037E Error while reading component.

Explanation: An error occurred while reading one of the components from the boot device.

Operator response: Check previous error messages, prepare your boot disk again, or take a machine loader dump and contact your IBM representative.

MLOLOA038E EXECUTE entry expected, received type *type***.**

Explanation: The machine loader found a component table entry other than type EXECUTE.

Operator response: Prepare your boot disk again or take a machine loader dump and contact your IBM representative.

MLOLOA039E Unable to create movemap entry.

Explanation: The machine loader was unable to create a movemap entry for the currently processed component.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOLOA040E Unable to open load device to read the Boot Record.

Explanation: The machine loader was unable to open the boot device.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOLOA041E Unable to find the component table pointer.

Explanation: The machine loader was unable to find the program table pointer within the boot record.

Operator response: Check previous error messages or prepare your boot disk again.

MLOLOA042E Pointer to component table block corrupted (zero block size).

Explanation: The machine loader has found the pointer to the component table, but the block size value is not valid.

Operator response: Prepare your boot disk again, check your disk preparation tool, or take a machine loader dump and contact your IBM representative.

MLOLOA043E Unable to seek to component table block in bootmap.

Explanation: The machine loader was unable to jump to the beginning of the component table block.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOLOA045E Error while reading component table.

Explanation: The machine loader was unable to read the component table block from the boot device.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOLOA046E Component table does not contain a valid magic number.

Explanation: The component table should contain a special magic number.

Operator response: Prepare your boot disk again, check your disk preparation tool, or take a machine loader dump and contact your IBM representative.

MLOLOA047E DUMP specified, but target system is not a valid dump program.

Explanation: The user has triggered a DUMP action; the specified dump disk does not contain a valid system dump program.

Operator response: Check your dump disk or check your disk preparation tool and prepare your dump disk again.

MLOLOA048E IPL specified, but target system is a dump program.

Explanation: The user has triggered an IPL action, but the specified boot disk does not contain a valid system control program.

Operator response: Check your IPL disk, or check your disk preparation tool and prepare your IPL disk again.

MLOLOA049E Unknown component table type: *type***.**

Explanation: The component table header contains an unknown type value.

Operator response: Check your disk preparation tool and prepare your disk dump again, or take a machine loader dump and contact your IBM representative.

MLOLOA050E Unable to seek to BRVD.

Explanation: The machine loader was unable to jump to the boot record volume descriptor of your boot optical media.

Operator response: Check your optical media device, check your boot optical media, or take a machine loader dump and contact your IBM representative.

MLOLOA051E Unable to read boot record volume descriptor.

Explanation: The machine loader is unable to read the boot record volume descriptor from the boot optical media.

Operator response: Check your optical media device or check your boot optical media.

MLOLOA052E BRVD - boot record indicator is not zero.

Explanation: The boot record volume descriptor on your boot optical media contains a nonzero value for the boot record indicator.

Operator response: Check your boot optical media.

MLOLOA053E BRVD - Wrong or missing ISO-9660 identifier.

Explanation: The machine loader expected another ISO-9660 identifier within the boot record volume descriptor of your boot optical media.

Operator response: Check your boot optical media.

MLOLOA054E BRVD - Wrong descriptor version.

Explanation: The machine loader expected another descriptor version within the boot record volume descriptor of your boot optical media.

Operator response: Check your boot optical media.

MLOLOA055E BRVD - Wrong or missing boot system identifier.

Explanation: The machine loader expected another boot system identifier within the boot record volume descriptor of your boot optical media.

Operator response: Check your boot optical media

MLOLOA056E Unable to seek to booting catalog.

Explanation: The machine loader was unable to jump to the booting catalog on your boot optical media.

Operator response: Check your optical media device, check your boot optical media, or take a machine loader dump and contact your IBM representative.

MLOLOA057E Unable to read booting catalog.

Explanation: The machine loader is unable to read the booting catalog from the boot optical media.

Operator response: Check your optical media device, check your boot optical media, or take a machine loader dump and contact your IBM representative.

MLOLOA058E Booting catalog - wrong header ID.

Explanation: The machine loader expected a different header ID within the booting catalog of your boot optical media.

Operator response: Check your boot optical media.

MLOLOA059E Booting catalog - wrong first key byte.

Explanation: The machine loader expected a different first key byte within the booting catalog of your boot optical media.

Operator response: Check your boot optical media.

MLOLOA060E Booting catalog - wrong second key byte.

Explanation: The machine loader expected a different second key byte within the booting catalog of your boot optical media.

Operator response: Check your boot optical media.

MLOLOA061E Wrong boot indicator.

Explanation: The machine loader expected a different boot indicator within the booting catalog of your boot optical media.

Operator response: Check your boot optical media.

MLOLOA062E Unable to read image block.

Explanation: The machine loader is not able to read the image from the boot optical media.

Operator response: Check your boot optical media or take a machine loader dump and contact your IBM representative.

MLOLOA063E DUMP memory limit reached: *number* **bytes.**

Explanation: Machine loader and system dump program have to fit into a special amount of main storage making sure not to destroy the dump. In this case, the system dump program is too large.

Operator response: Check your optical media containing the system dump program, or take a machine loader dump and contact your IBM representative.

MLOLOA064E Unable to load data to memory address: *address***.**

Explanation: The machine loader was unable to copy the image to a temporary memory location.

Operator response: Check previous error messages, increase main storage, or take a machine loader dump and contact your IBM representative.

MLOLOA065E Unable to create movemap entry.

Explanation: The machine loader was unable to create a movemap entry for the image.

Operator response: Check previous error messages or take a machine loader dump and contact your IBM representative.

MLOLOA066E Unable to seek to previous sector.

Explanation: The machine loader has re-read the last data chunk since a memory chunk border was encountered. The loader was unable to reposition the read pointer.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOLOA067E Unable to open optical media device.

Explanation: The machine loader is unable to open the optical media boot device.

Operator response: Check your optical media device, check your optical media, or take a machine loader dump and contact your IBM representative.

MLOLOA070E Unable to seek to optical media start sector.

Explanation: The machine loader was unable to jump to the start sector of your optical media.

Operator response: Check your optical media device, check your optical media, or take a machine loader dump and contact your IBM representative.

MLOLOA071I Unable to load parameters to memory address: *address1***, using** *address2* **now.**

Explanation: Load parameters had to be saved to a different memory location.

Operator response: None.

MLOLOA072E Unable to load parameters to memory address: *address***.**

Explanation: Load parameters could not be saved to memory.

Operator response: Increase your storage.

MLOLOA073E Unable to create movemap entry.

Explanation: The machine loader was unable to create a movemap entry for the boot parameters.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOLOA074E Unable to create movemap entry.

Explanation: The machine loader was unable to create a movemap entry.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOLOA075E System dump programs on optical media are not supported

Explanation: System dump programs on optical media are not supported.

Operator response: Make sure that you specify a nonoptical disk as the target device for your dump data.

MLOLOA076W Invalid section header indicator.

Explanation: The section header entry of the EI Torito boot format on the optical IPL media is invalid. The section header entry will be skipped.

Operator response: Inform your distributor, who has provided the optical media, about this problem.

MLOLOA077E Missing or invalid section entry boot indicator.

Explanation: The section header entry of the EI Torito boot format on the optical IPL media contains an invalid boot indicator. Either this is an invalid entry or the boot configuration is flagged not bootable.

Operator response: Inform your distributor, who has provided the optical media, about this problem.

MLOLOA078W Section entry extensions are not supported.

Explanation: Extensions from section entries are not supported and will be skipped.

Operator response: In case the IPL or installation does not complete successfully, inform your distributor, who has provided the optical media about this problem.

MLOLOA079E Invalid boot section entry.

Explanation: There is an invalid section entry in the El Torito boot format on the optical IPL media.

Operator response: Inform your distributor, who has provided the optical media about this problem.

MLOLOA080E Block size of a segment table pointer is zero.

Explanation: Block sizes of all segment table pointers have to be greater than zero.

Operator response: Prepare your boot disk again.

MLOLOA081E Program Table Pointer in Boot Record is not valid. (*block number/block size***)**

Explanation: Block number or size of a program table pointer must never be zero.

Operator response: Prepare your boot disk again.

MLOLOA082E No IMAGE component table entry found.

Explanation: There is no IMAGE entry that specifies the data to load from the disk.

Operator response: Prepare your boot disk again.

MLOLOA083E Buffer address <address> is not on page boundary.

Explanation: Internal error - a misaligned memory buffer was detected.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOLOA084E Invalid function code <function code> specified.

Explanation: Internal error - an illegal function code was specified.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOLOA085E Did not get memory for Load Function Parameter List.

Explanation: The machine loader did not get a memory buffer needed.

Operator response: Increase the memory of your guest and retry.

MLOLOA086E File transfer failed with error code <error code>.

Explanation: System error. This can have multiple reasons.

Operator response:

- Check whether your zVM level is v6.1 or higher.
- If error code is 4, the zVM FTP interface is already in use. Please retry the operation.
- For any other error code, contact your IBM representative.

MLOLOA087E File transfer TIMED OUT !

Explanation: System error.

Operator response:

- Check your IPL parameter settings and retry the operation.
- If the problem persists, please ask your IBM representative.

MLOLOA088E File transfer returned bad Status code <status code> !

Explanation: System error.

Operator response:

- Check your IPL parameter settings and retry the operation.
- If the problem persists, please ask your IBM representative.

MLOLOA089E Unable to create movemap entry for image.

Explanation: The machine loader was unable to create a movemap entry for the loaded image.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOLOA090E Error creating DUMMY movemap entry for IPL parameters.

Explanation: The machine loader was unable to create a movemap entry for the load parameters.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOLOA091E Error creating DUMMY execute movemap entry.

Explanation: The machine loader was unable to create an execute movemap entry.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOLOA092E Fragmented memory NOT supported !

Explanation: Fragmented memory is not supported for this action.

Operator response: Please configure your zVM Guest with contiguous memory and repeat.

MLOLOA093E Failed to register interrupt handler.

Explanation: Internal error - registration of an interrupt handler failed.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOLOA094E Failed to get file size (<code>).

Explanation: The SCSI IPL Machine Loader was not able to detect the size of the container to load.

Operator response:

- Check for previous error messages.
- If this does not help to resolve the problem, please ask your IBM representative.

MLOLOA095E Not enough memory left to load file !

Explanation: The container to be loaded exceeds the guest's memory.

Operator response: Increase the memory of your zVM guest and retry.

MLOLOA096E Failed to load file (<code>).

Explanation: The SCSI IPL Machine Loader was not able to load the container into guest memory.

Operator response:

- Check for previous error messages.
- If this does not help to resolve the problem, please ask your IBM representative.

MLOLOA097E Failed copy ipl parameters.

Explanation: The SCSI IPL Machine Loader was not able to copy the IPL Parameters.

Operator response: Check previous error messages or take a machine loader dump and contact your IBM representative.

MLOLOA097I Fragmented memory not supported, only using memory up to first memory gap (0x# bytes) !

Explanation: Fragmented memory is not supported for this action. Only the first contiguous memory chunk will be used.

Operator response: None.

MLOLOA099W File transfer service is currently busy (<error code>). Retrying.

Explanation: File transfer service is currently busy. Operation will be retried automatically.

Operator response: None.

MLOLOA100W File transfer recoverable error (<error code>). Retrying.

Explanation: File transfer encountered a recoverable problem. Operation will be retried automatically.

Operator response: None.

MLOLOA101E Unknown return code (<error code>) received from File transfer !

Explanation: System error.

Operator response: Take a machine loader dump and contact your IBM representative.

MLOLOAnnnE Out of memory.

Explanation: The machine loader ran out of memory; (*nnn* may take various values).

Operator response: Take a machine loader dump and contact your IBM representative.

Chapter 3. User errors

This chapter contains some examples of the more important user errors from the machine loader.

FCP adapter (devno)

```
MLOFCP011E: Device 0.0#### is not a recognized FCP device.
MLOEVL012I: Machine loader up and running (version v#.##).
MLOEVL022E: Failed to get a valid subchannel number for device 0x####.
MLOEVL010E: IPL failed.
```

Problem:

You specified an FCP adapter that was not online or nonexisting. The machine loader does not recover successfully.

Solution:

Check your specified adapter number or check if the adapter is available to your system.

World wide port name (WWPN)

```
MLOFCP003W: WWPN 0x################ not found by nameserver lookup.
MLOFCP009E: Unable to open target port with WWPN 0x################ (d_id 0x########)
on adapter 0x####.
MLOEVL012I: Machine loader up and running (version v#.##).
MLOEVL005E: No SCSI device found on adapter 0x#### with WWPN 0x################
and LUN 0x################.
MLOEVL010E: IPL failed.
```

Problem:

You specified a port name (WWPN) that was wrong or nonexisting.

Solution:

Check your specified WWPN number or check the port.

Logical unit number (LUN)

```
MLOEVL012I: Machine loader up and running (version v#.##).
MLOEVL005E: No SCSI device found on adapter 0x#### with WWPN 0x################
and LUN 0x################.
MLOEVL010E: IPL failed.
```

Problem:

You specified a LUN that was of a nonexisting SCSI disk; the disk is not accessible. The specified SCSI disk was not properly prepared and the machine loader detected an invalid boot record.

Solution:

Check your SCSI disk LUN or check your SCSI disk preparation.

Boot record LBA

```
MLOEVL012I: Machine loader up and running (version v#.##).
MLOLOA010E: Boot Record does not contain a valid pointer.
MLOLOA041E: Unable to find the component table pointer.
MLOEVL010E: IPL failed.
```

Problem:

The machine loader was unable to find the boot record. The SCSI disk was not set up properly and the boot record is corrupted.

Solution:

Check if the boot record field was set correctly; you could be pointing to a nonexistent boot record. The default is zero. Check your disk preparation.

Boot program selector

```
MLOEVL012I: Machine loader up and running (version v#.##)
MLOLOA014E: Boot Program Table entry is not valid. (0/512)
MLOLOA041E: Unable to find the component table pointer.
MLOEVL010E: IPL failed.
```

Problem:

The machine loader was unable to find your specified boot configuration.

Solution:

Check if the boot program selector field was set correctly; you could be pointing to a nonexistent configuration. Check your disk preparation.

DUMP of an IPL disk

```
MLOEVL012I: Machine loader up and running (version v#.##).
MLOLOA047E: DUMP specified, but target system is not a valid dump program.
MLOEVL011E: DUMP failed.
```

Problem:

You are trying to dump from a SCSI disk, which was prepared for SCSI IPL.

Solution:

Check your specified SCSI disk.

IPL of a DUMP disk

```
MLOEVL012I: Machine loader up and running (version v#.##).
MLOLOA048E: IPL specified, but target system is a dump program.
MLOEVL011E: DUMP failed.
```

Problem:

You are trying to IPL from a SCSI disk, which was prepared for SCSI Dump and contains a system dumper.

Solution:

Check your specified SCSI disk.

Appendix A. How to take a machine loader dump

If there are problems during a SCSI IPL of a logical partition or while taking a SCSI dump of a partition, you may be required to take a dump of the machine loader that performs the SCSI IPL or SCSI DUMP function. This will assist your IBM representative in diagnosing the problem. Several error messages described in this publication require you to take a machine loader dump. For more information on how to take a dump of the machine loader, refer to the "Dumping SCSI IPL Data" section in one of the following publications:

- *zEnterprise® System Support Element Operations Guide*
  - **Note:** The content from this publication can be found on the console help system, or on the IBM Knowledge Center at http://www.ibm.com/support/knowledgecenter/ (Select **z Systems** on the navigation bar, and then select your server)
- *System z10® Support Element Operations Guide*, SC28-6879
- *System z9® Support Element Operations Guide*, SC28-6860
- *zSeries 890 and 990 Support Element Operations Guide*, SC28-6831
- *zSeries 800 and 900 Support Element Operations Guide*, SC28-6818

If this problem occurs during an IPL of a z/VM guest operating system and the associated error message requires you to take a machine loader dump, you must take a plain z/VM guest memory dump in order to preserve the machine loader state. It is recommended that you use a Linux system to obtain the memory dump. For more information, refer to *Linux on z Systems: Using the Dump Tools*, SC33-8290.

Appendix B. Notices

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Class A Notices

The following Class A statements apply to this IBM product. The statement for other IBM products intended for use with this product will appear in their accompanying manuals.

Federal Communications Commission (FCC) Statement

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. IBM is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Industry Canada Compliance Statement

This Class A digital apparatus complies with Canadian ICES-003.

Avis de conformité à la réglementation d'Industrie Canada

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

European Community Compliance Statement

This product is in conformity with the protection requirements of EU Council Directive 2014/30/EU on the approximation of the laws of the Member States relating to electromagnetic compatibility. IBM cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the fitting of non-IBM option cards.

This product has been tested and found to comply with the limits for Class A Information Technology Equipment according to European Standard EN 55032. The limits for Class A equipment were derived for commercial and industrial environments to provide reasonable protection against interference with licensed communication equipment.

European Community contact:
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Technical Regulations, Department M372
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Warning: This is a Class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

VCCI Statement - Japan

この装置は, クラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。 VCCI－A

The following is a summary of the Japanese VCCI statement above:

This is a Class A product based on the standard of the VCCI Council. If this equipment is used in a domestic environment, radio interference may occur, in which case the user may be required to take corrective actions.

Japan JIS C 61000-3-2 Compliance

（一社）電子情報技術産業協会　高調波電流抑制対策実施
要領に基づく定格入力電力値： Knowledge Centerの各製品の
仕様ページ参照

For products less than or equal to 20 A per phase, the following statement applies:

高調波電流規格 JIS C 61000-3-2 適合品

For products greater than 20 A, single-phase, the following statements apply:

高調波電流規格 JIS C 61000-3-2 準用品

本装置は、「高圧又は特別高圧で受電する需要家の高調波抑制対策ガイドライン」対象機器（高調波発生機器）です。
回路分類：６（単相、ＰＦＣ回路付）
換算係数：０

For products greater than 20 A per phase, three-phase, the following statements apply:

高調波電流規格 JIS C 61000-3-2 準用品

本装置は、「高圧又は特別高圧で受電する需要家の高調波抑制対策ガイドライン」対象機器（高調波発生機器）です。
回路分類　：５（３相、ＰＦＣ回路付）
換算係数　：０

Electromagnetic Interference (EMI) Statement - People's Republic of China

声　明

此为Ａ级产品，在生活环境中，
该产品可能会造成无线电干扰。
在这种情况下，可能需要用户对其
干扰采取切实可行的措施。

Declaration: This is a Class A product. In a domestic environment, this product may cause radio interference, in which case the user may need to perform practical action.

Electromagnetic Interference (EMI) Statement - Taiwan

警告使用者:
這是甲類的資訊產品，在
居住的環境中使用時，可
能會造成射頻干擾，在這
種情況下，使用者會被要
求採取某些適當的對策。

The following is a summary of the Taiwan EMI statement above:

Warning: This is a Class A product. In a domestic environment, this product may cause radio interference, in which case the user will be required to take adequate measures.

IBM Taiwan Contact Information:

台灣IBM 產品服務聯絡方式：
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台北市松仁路7號3樓
電話：0800-016-888

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Germany Compliance Statement

Deutschsprachiger EU Hinweis: Hinweis für Geräte der Klasse A EU-Richtlinie zur Elektromagnetischen Verträglichkeit

Dieses Produkt entspricht den Schutzanforderungen der EU-Richtlinie 2014/30/EU zur Angleichung der Rechtsvorschriften über die elektromagnetische Verträglichkeit in den EU-Mitgliedsstaaten und hält die Grenzwerte der EN 55032 Klasse A ein.

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"Warnung: Dieses ist eine Einrichtung der Klasse A. Diese Einrichtung kann im Wohnbereich Funk-Störungen verursachen; in diesem Fall kann vom Betreiber verlangt werden, angemessene Maßnahmen zu ergreifen und dafür aufzukommen."

Deutschland: Einhaltung des Gesetzes über die elektromagnetische Verträglichkeit von Geräten

Dieses Produkt entspricht dem “Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG)“. Dies ist die Umsetzung der EU-Richtlinie 2014/30/EU in der Bundesrepublik Deutschland.

Zulassungsbescheinigung laut dem Deutschen Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG) (bzw. der EMC EG Richtlinie 2014/30/EU) für Geräte der Klasse A

Dieses Gerät ist berechtigt, in Übereinstimmung mit dem Deutschen EMVG das EG-Konformitätszeichen - CE - zu führen.

Verantwortlich für die Einhaltung der EMV Vorschriften ist der Hersteller:
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Der verantwortliche Ansprechpartner des Herstellers in der EU ist:
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email: halloibm@de.ibm.com

Generelle Informationen:

Das Gerät erfüllt die Schutzanforderungen nach EN 55024 und EN 55032 Klasse A.

Electromagnetic Interference (EMI) Statement - Russia

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В жилых помещениях оно может создавать радиопомехи, для снижения которых необходимы дополнительные меры

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